

What is claimed is:

- 1 1. A semiconductor laser module comprising:
2 a semiconductor substrate;
3 a laser diode secured on said substrate for emission of a forward laser
4 beam from a forward end thereof and for emission of a backward laser beam
5 from a point source on a rearward end thereof in a horizontal direction; and
6 a photodiode secured on said substrate, said photodiode having a light
7 receiving surface extending in the horizontal direction by length L from an
8 edge proximate to the laser diode for receiving a lower half of said backward
9 laser beam, said light receiving surface being lower than said point source by a
10 vertical distance Y, said edge being spaced a horizontal distance Z from said
11 point source of the laser diode,
12 wherein the horizontal distance Z is equal to or greater than $(Y / \tan \theta) - L$,
13 where θ is a vertical angle in which said lower half of the backward laser beam
14 radiates from said point source.
- 1 2. The semiconductor laser module of claim 1, wherein said laser
2 diode and said photodiode are not covered with resin.
- 1 3. The semiconductor laser module of claim 1, wherein said
2 substrate has an upper surface and a lower surface, and wherein said laser
3 diode is secured on said upper surface and said photodiode is secured on said
4 lower surface.
- 1 4. The semiconductor laser module of claim 2, wherein said lower
2 surface and said light receiving surface are parallel to each other.
- 1 5. The semiconductor laser module of claim 1, wherein said
2 semiconductor substrate is formed of silicon.

1 6. The semiconductor laser module of claim 1, wherein said
2 substrate is formed of a single-crystalline silicon and said lower surface is an
3 anisotropically etched surface.

1 7. The semiconductor laser module of claim 1, further comprising a
2 laser driver for driving the laser diode with a high frequency electrical signal.

1 8. The semiconductor laser module of claim 7, wherein said laser
2 driver is secured on said lower surface in a position adjacent to said
3 photodiode and remote from said laser diode.

1 9. The semiconductor laser module of claim 8, wherein said
2 substrate is formed with a recess in which said lower surface is created and
3 said photodiode and said laser driver are secured, further comprising:
4 an electrode patterned on said upper surface extending from said laser
5 diode to a position close to said laser diode; and
6 a bonding wire for connecting said laser diode to one end of said
7 electrode, whereby said high frequency electrical signal is supplied through
8 said bonding wire and said electrode to said laser diode.